

V. REMARKS

Claim 14 is rejected under 35 U.S.C. 102(b) as anticipated by Kim et al. (KR 332954). The rejection is respectfully traversed.

Kim teaches a plastic intake manifold for a variable intake engine system that includes an upper housing, a center housing and a lower housing. The upper housing is fabricated from plastic and has a division surface that is horizontally cut in a vicinity of a center on a communications channel. The communications channel communicates with a throttle body to form an upper half of a plenum chamber. A top part of the division surface is formed as outer walls of circulation channels for each cylinder. The center housing is fabricated from plastic and has an upper division surface that corresponds to the division surface of the upper housing to form a lower half of the plenum chamber. The center housing has lower division surfaces for dividing runners before each cylinder by half and a direct channel before each cylinder for communicating with the plenum chamber. The lower housing fabricated from plastic also includes division surfaces that correspond to the lower division surfaces of the center housing to form lower parts of the runners.

Claim 14, as amended, is directed to a resin intake manifold provided with a surge tank arranged between a throttle body and an engine and reserving an air, and a plurality of branch pipes including end branch pipes and inner branch pipes disposed between the end branch pipes and each having a discharge port connected to each cylinder of an engine in one end and forming an air passage, and distributing the air to each of the cylinders of the engine. Claim 14 recites that the resin intake manifold includes an upper piece defining partial portions of each one of the plurality of branch pipes, a center piece defining remaining partial portions of each one of the plurality of branch pipes and a lower piece with the upper piece and the center piece being connected together to define at least in part the plurality of branch pipes and the center piece and the lower piece being connected together to define at least in part the surge tank with the center piece being connected to and between the upper and lower pieces. Claim 14 further recites that the lower piece having a curved inner wall portion disposed

opposite to and extending generally away from the plurality of branch pipes and the plurality of branch pipes arranged in a stepped-apart manner relative to one another with the curved inner wall portion and the arrangement of the plurality of branch pipes defining an expanded central surge tank portion of the surge tank as generally viewed centrally of the surge tank between the curved inner wall portion and the plurality of branch pipes.

Support for these amendments can be found in Figure 24 as well as in the specification on page 28, paragraph 1.

The surge tank in Kim is a linear shape in the longitudinal direction, so the construction of the present invention and cited reference is now clearly distinguished. The weakest point in the strength of the surge tank is in the longitudinal direction. Therefore, as with the present invention, when the lower wall portion of the surge take is curved and expands outwardly along a longitudinal direction, the pressure resistance of the surge tank is improved.

It is respectfully submitted that that the rejection is improper because the applied art fails to teach each element of claim 14 as amended. Specifically, it is respectfully submitted that the applied art fails to teach that that the lower piece having a curved inner wall portion disposed opposite to and extending generally away from the plurality of branch pipes and the plurality of branch pipes arranged in a stepped-apart manner relative to one another with the curved inner wall portion and the arrangement of the plurality of branch pipes defining an expanded central surge tank portion of the surge tank as generally viewed centrally of the surge tank between the curved inner wall portion and the plurality of branch pipes. As a result, it is respectfully submitted that claim 14 is allowable over the applied art.

Withdrawal of the rejection is respectfully requested.

Claim 15 is rejected under 35 U.S.C. 103(a) as unpatentable over Kim. The rejection is respectfully traversed.

Again, to avoid prolonged prosecution of the application, we propose amending claim 15 in a manner similar to claim 14.

Claim 15, as amended, is directed to a resin intake manifold provided with a surge tank arranged between a throttle body and an engine and reserving an air, and a plurality of branch pipes including end branch pipes and inner branch pipes disposed between the end branch pipes and each having a discharge port connected to each cylinder of an engine in one end and forming an air passage, and distributing the air to each of the cylinders of the engine. Claim 15 recites that, the surge tank is formed by three pieces separated by a separation part separating along a parallel arranging direction of the branch pipes in the surge tank and a separation part separating the branch pipes along the parallel arranging direction of the branch pipes, in a cut surface cutting a plurality of branch pipes and the surge tank in the resin intake manifold, and is bonded in the respective separation parts in accordance with a vibration welding.

Further, claim 15 recites that the resin intake manifold includes an upper piece defining partial portions of each one of the plurality of branch pipes, a center piece defining remaining partial portions of each one of the plurality of branch pipes and a lower piece, the upper piece and the center piece being connected together to define at least in part the plurality of branch pipes and the center piece and the lower piece being connected together to define at least in part the surge tank with the center piece being connected to and between the upper and lower pieces. Also, claim 15 recites that the lower piece has a curved inner wall portion disposed opposite to and extends generally away from the plurality of branch pipes and the plurality of branch pipes are arranged in a stepped-apart manner relative to one another with the curved inner wall portion and the arrangement of the plurality of branch pipes defining an expanded central surge tank portion of the surge tank as generally viewed centrally of the surge tank between the curved inner wall portion and the plurality of branch pipes.

It is respectfully submitted that none of the applied art, alone or in combination, teaches or suggests the features of claim 15 as amended. Specifically, it is respectfully submitted that none of the applied art, alone or in combination, teaches or suggests that the resin intake manifold includes an upper piece defining partial portions of each one of the plurality of branch pipes,

a center piece defining remaining partial portions of each one of the plurality of branch pipes and a lower piece, the upper piece and the center piece being connected together to define at least in part the plurality of branch pipes and the center piece and the lower piece being connected together to define at least in part the surge tank with the center piece being connected to and between the upper and lower pieces. Also, it is respectfully submitted that the applied art fails to teach or suggest that the lower piece has a curved inner wall portion disposed opposite to and extends generally away from the plurality of branch pipes and the plurality of branch pipes are arranged in a stepped-apart manner relative to one another with the curved inner wall portion and the arrangement of the plurality of branch pipes defining an expanded central surge tank portion of the surge tank as generally viewed centrally of the surge tank between the curved inner wall portion and the plurality of branch pipes. Thus, it is respectfully submitted that one of ordinary skill in the art would not be motivated to combine the features of the applied art because such combination would not result in the claimed invention. As a result, it is respectfully submitted that claim 15 is allowable over the applied art.

Withdrawal of the rejection is respectfully requested.

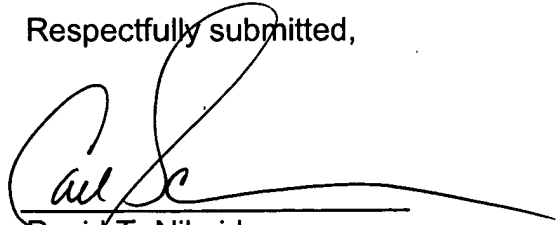
In view of the foregoing, reconsideration of the application and allowance of the pending claims are respectfully requested. Should the Examiner believe anything further is desirable in order to place the application in even better condition for allowance, the Examiner is invited to contact Applicants' representative at the telephone number listed below.

Should additional fees be necessary in connection with the filing of this paper or if a Petition for Extension of Time is required for timely acceptance of the same, the Commissioner is hereby authorized to charge Deposit Account No. 18-0013 for any such fees and Applicant(s) hereby petition for such extension of time.

Respectfully submitted,

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By:


David T. Nikaido
Reg. No. 22,663

Carl Schaukowitch
Reg. No. 29,211

RADER, FISHMAN & GRAUER PLLC
1233 20th Street, N.W. Suite 501
Washington, D.C. 20036
Tel: (202) 955-3750
Fax: (202) 955-3751
Customer No. 23353

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